CHILDHOOD THYROTOXICOSIS

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ABSTRACT

Most of the thyrotoxic patients are adult and it is rare (about 1% of adult) in childhood. This rarity prompts us to report these two cases (both girl, age 10 & 12 years) found recently, confirmed by radioiodine uptake (RAIU), radioassay of thyroid related hormones (T_3, T_4 TSH levels) and both of them had been followed upto clinical cure by carbimazole and radioiodine (I-131) therapy.

CASE REPORTS

(1) A young girl aged 12 years, referring from Lalmonirhat Al-Nahiyan Shishu Paribar (Orphanage) on 22-09-93 complained of palpitations, weight loss inspite of increased appetite, insomnia and trembling. On examination, her pulse rate was 120min, both eye-balls were protruded (bilateral exophthalmos), skin was warm and moist, thyroid gland was enlarged diffusely (grade 1b), radioiodine uptake (RAIU) was high with rapid turnover, (2h 20%, 24h 46%, 48h 30%) radioimmunoassay of thyroid hormones (T_3 = triiodothyronine, T_4 = thyroxine) showed elevated serum levels (Table-1). She was treated with carbimazole 10mg/day up to 29-11-96 with little improvement, then she was given radioiodine (I-131) therapy (5mCi) and was found euthyroid on 06-06-97. Long - term follow-up is being done.

(2) Another girl aged 10 years from Adorshapara, Rangpur complained of generalized weakness, palpitations, insomnia and trembling. On examination, her pulse rate was 128/min. both eye-balls were slightly prominent, skin was warm, thyroid gland was slightly enlarged (grade 1a.) Her thyroid hormone levels (T_3, T_4) were high and thyrotropin (thyroid stimulating hormone, TSH) level was low (Table-1). She was treated with carbimazole 20mg/day, evaluated several times and gradually tapered down over about six months (Sep. 94 to Feb. 95) & now confirmed euthyroid by RIA and clinical examinations (T_3 = 2.67 nmol/L, T4 = 104.7 nmol/L). Long - term follow-up is being done.

Table-1 Hormone levels*

Pt. No.	T_3 normal ranges 0.8--2.7 n mol/L	T_4 normal ranges 62--165 n mol/L	TSH normal ranges 0.48--4.8 μ IU/ml
01.	11.2	320	--------
02.	13.8	240	<0.2

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DISCUSSION

Most of the northern districts of Bangladesh are iodine-deficient and endemic goitre area.

Cretinism (congenital hypothyroidism) are widely prevalent, but the clinicians should be aware that some children even on the contrary may be thyrotoxic (hyperthyroid) even,[1] as demonstrated in the present cases. Older textbooks mentioned that children and adolescents should not be treated with radioiodine for thyrotoxicosis, but recent research works are in favour of radioiodine therapy,[2-6] rather antithyroid drugs may give rise to serious adverse reactions which may reach as high as 40% in children and the incidence of surgical complications is higher than other modalities.[7] Leukemia and other cancers apparently do not increase after radioiodine treatment.[8] Long - term follow-up is important to check recurrence of hyperthyroidism and/or hypothyroidism.

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